



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/576,648	05/22/2000	Kar W. Yung	PD200049	3266

20991 7590 03/09/2004

HUGHES ELECTRONICS CORPORATION
PATENT DOCKET ADMINISTRATION RE/R11/A109
P O BOX 956
EL SEGUNDO, CA 90245-0956

EXAMINER

TORRES, MARCOS L

ART UNIT PAPER NUMBER

2683

DATE MAILED: 03/09/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/576,648

Applicant(s)

YUNG ET AL.

Examiner

Marcos L Torres

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 15-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Wright (6,621,801).

As to claim 15, Matthews discloses a mobile wireless communication system (see fig. 1, item 10), comprising: a plurality of individual transponder nodes (see fig. 2, items 12, 14), each having an established link with a ground hub (see fig. 2, item 30); a plurality of individual resource cells each associated with one of said plurality of transponder nodes and one of a plurality of codes (see fig. 2, item 20; par. 0016, 0022); and a plurality of remote users having an established link with said ground hub (see fig. 2, item 24, and each being assigned one or more of said plurality of individual resource cells in code-platform space (see fig. 2, item 20; par. 0016). Matthews do not specifically disclose a communication system for a variety of different mobile user types. Wright discloses a communication system for a variety of different mobile user types using a satellite (see col. 5, lines 1-3). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these techniques to manage the wireless communication resources for a reliable transmission and reception.

As to claims 16-17 and 19, Matthews discloses the system wherein a plurality of individual transponding nodes is a manned/unmanned aircraft (see par. [0005-0006]; fig. 1-2, items 12,14).

5. Claim 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Wright (6,621,801) as applied to claims 15-17 and 19 above, and further in view of Tuck.

As to claim 18, Matthews do not specifically disclose the system wherein said high altitude platform system is comprised of a plurality of high altitude balloons. Tuck

discloses the system wherein said high altitude platform system is comprised of a plurality of high altitude balloons (see col. 9, lines 16-24). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to use this airborne platform for the simple purpose of saving money.

As to claim 20, Matthews do not specifically disclose the system wherein said pluralities of individual transponder nodes are not all of the same type. Tuck disclose the system wherein said plurality of individual transponder nodes are not all of the same type (see col. 2, lines 47-57). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to add this teaching to the modified Matthews system for an enhanced coverage.

6. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Wright (6,621,801) as applied to claims 15-17 and 19 above, and further in view of Moerder.

As to claims 21, Matthews do not specifically disclose wherein said processing hub pre processes signals for forward link transmission such that they are radiated with compensating time delays to an intended one of said plurality of mobile users who coherently receives all such signals intended for him; wherein said processing hub post processes received signals to introduce compensating time delays such that all such signals received from a particular remote user may be coherently processed together. Moerder discloses a processing hub pre processes signals for forward link transmission such that they are radiated with compensating time delays to an intended one of said plurality of mobile users who coherently receives all such signals intended for him;

Art Unit: 2683

wherein said central processing hub post processes received signals to introduce compensating time delays such that all such signals received from a particular remote user may be coherently processed together (see col. 6, lines 20-30). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine this teaching to the modified Matthews system for the simple purpose of synchronization.

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Wright (6,621,801) as applied to claims 15-17 and 19 above, and further in view of Wright (6,507,926).

As to claim 22, Matthews do not specifically disclose the system wherein at least one said plurality of mobile terminals is assigned resource cells in platform-code space for said return link that are different from said resource cells in platform-code space assigned for said forward link. Wright disclose the system wherein at least one said plurality of mobile terminals is assigned resource cells in platform-code space for said return link that are different from said resource cells in platform-code space assigned for said forward link (see col. 3, lines 4-13). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for reducing interference.

8. Claims 1,3, 5, 7, 9-11 and 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Ketterling and further in view of Wright (6,621,801).

As to claim 1, Matthews discloses a mobile wireless communication system (see fig. 1, item 10), comprising: a plurality of individual transponding nodes (see fig. 2, item 12, 14); a plurality of individual resource cells each associated with a particular one of said plurality of transponding nodes and one of a plurality of available CDMA codes (see par. 0016, 0022); and a plurality of mobile terminals, each of which is assigned to operate in one or more of said plurality of individual resource cells (see fig. 2, item 24); wherein each of said plurality of individual resource cells is assigned to one of said plurality of mobile terminals (see par. 0016). Matthews do not specifically disclose a cell for only one user or a communication system for a variety of different mobile user types. Matthews discloses one or more users and Ketterling discloses setting a limit on the maximum number of users (see abstract). Wright discloses a communication system for a variety of different mobile user types using a satellite (see col. 5, lines 1-3). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these techniques to manage the wireless communication resources for a reliable transmission and reception.

As to claims 3, 5 and 7, Matthews discloses the system wherein a plurality of individual transponding nodes is a manned/unmanned aircraft (see par. [0005-0006]; fig. 1-2, items 12,14).

As to claim 13, Matthews discloses the method wherein at least one of said plurality of transponder nodes is selected from a tower based cellular network (see par. 0017).

As to claim 14, Wright discloses the method wherein at least one of said plurality of transponder nodes is selected from a space-based system (see col. 1, lines 16-22).

Regarding claims 9-11, they are the corresponding method claims of system claims 1,3 and 5. Therefore, claims 9-11 are rejected for the same reason shown above.

9. Claims 6, 8 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Ketterling and further in view of Wright (6,621,801) as applied to claims 1,3, 5, 7, 9-11 and 13-14above, and further in view of Tuck.

As to claims 6 and 12, Matthews do not specifically disclose the system wherein said high altitude platform system is comprised of a plurality of high altitude balloons. Tuck discloses the system wherein said high altitude platform system is comprised of a plurality of high altitude balloons (see col. 9, lines 16-24). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to use this airborne platform for the simple purpose of saving money.

As to claims 8, Matthews do not specifically disclose the system wherein said pluralities of individual transponder nodes are not all of the same type. Tuck disclose the system wherein said plurality of individual transponder nodes are not all of the same type (see col. 2, lines 47-57). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to add this teaching to the modified Matthews system for an enhanced coverage.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Ketterling and further in view of Wright (6,621,801) as applied to claims 1,3, 5, 7, 9-11 and 13-14above, and further in view of Moerder.

As to claims 2, Matthews discloses the system further comprising: a central processing hub, which establishes links to one or more of said users through one or more of said plurality of transponding nodes wherein the specific transponding node and codes used to complete each of said links is determined by the resource cells assigned to the user (see par. 0015-0017). Matthews do not specifically disclose wherein said central processing hub pre processes signals for forward link transmission such that they are radiated with compensating time delays to an intended one of said plurality of mobile users who coherently receives all such signals intended for him; wherein said central processing hub post processes received signals to introduce compensating time delays such that all such signals received from a particular remote user may be coherently processed together. Moerder discloses a processing hub pre processes signals for forward link transmission such that they are radiated with compensating time delays to an intended one of said plurality of mobile users who coherently receives all such signals intended for him; wherein said central processing hub post processes received signals to introduce compensating time delays such that all such signals received from a particular remote user may be coherently processed together (see col. 6, lines 20-30). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine this teaching to the modified Matthews system for the simple purpose of synchronization.

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews in view of Ketterling and further in view of Wright (6,621,801) as applied to claims 1,3, 5, 7, 9-11 and 13-14 above, and further in view of Wright (6,507,926).

As to claim 4, Matthews do not specifically disclose the system wherein at least one said plurality of mobile terminals is assigned resource cells in platform-code space for said return link that are different from said resource cells in platform-code space assigned for said forward link. Wright disclose the system wherein at least one said plurality of mobile terminals is assigned resource cells in platform-code space for said return link that are different from said resource cells in platform-code space assigned for said forward link (see col. 3, lines 4-13). Therefore, it would have been obvious to one of the ordinary skill in the art at the time of the invention to combine these teachings for reducing interference.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Chen U.S. Patent US006067458A
- b. Choate U.S. Patent US005212804A
- c. Chang U.S. Patent US006337980B1
- d. Ibanez-Meier U.S. Patent US006151308A
- e. Weiss U.S. Patent US006016421A
- f. Shoki U.S. Patent US006308085B1
- g. Djuknic U.S. Patent US005974317A

- h. Fried U.S. Patent US006094581A
- i. Von der Embse U.S. Patent US005903549A
- j. Palmer U.S. Patent 5,625,640

Any response to this Office Action should be mailed to:

Commissioner of Patent and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 703-872-9314

For formal communication intended for entry, informal communication or draft communication; in the case of informal or draft communication, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

Crystal Park II
2121 Crystal Drive
Arlington, VA
Sixth Floor (Receptionist)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcos L Torres whose telephone number is 703-305-1478. The examiner can normally be reached on 8:00am-5:30pm alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William G Trost can be reached on 703-308-5318. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2683

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marcos L Torres
Examiner
Art Unit 2683

Mlt



WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600